

[Federal Register: March 7, 2007 (Volume 72, Number 44)]
[Rules and Regulations]
[Page 10054-10057]
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[DOCID:fr07mr07-6]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27308; Directorate Identifier 2007-NE-06-AD; Amendment 39-14977; AD 2007-05-16]

RIN 2120-AA64

Airworthiness Directives; General Electric Aircraft Engines (GE) CF34-3A1/-3B/-3B1 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: This action supersedes emergency airworthiness directive (AD) 2007-04-51 that was sent previously to all known U.S. owners and operators of GE CF34-3A1/-3B/-3B1 turbofan engines. That action required a onetime visual and tactile inspection of certain areas of certain serial number (SN) fan disks for an arc-out defect, within 20 engine flight hours after the effective date of that AD. This AD supersedes AD 2007-04-51 and adds eight SNs to the list of suspect fan disks. This AD results from GE discovering eight additional SNs of fan disks suspected of having an arc-out defect, and from the original report that a GE CF34-3B1 turbofan engine experienced an uncontained fan disk failure during flight operation. We are issuing this AD to prevent an uncontained fan disk failure and airplane damage.

DATES: This AD becomes effective March 12, 2007. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of March 12, 2007.

We must receive any comments on this AD by May 7, 2007.

ADDRESSES: Use one of the following addresses to comment on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.
- Fax: (202) 493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Contact General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, fax (513) 672-8422 for the service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Tara Chaidez, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803, e-mail: tara.chaidez@faa.gov; telephone (781) 238-7773; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: On February 16, 2007, the FAA issued emergency AD 2007-04-51, that applies to GE CF34-3A1/-3B/-3B1 turbofan engines. That AD requires a onetime visual and tactile inspection of certain areas of certain SN fan disks, within 20 engine flight hours after the effective date of that AD. That AD resulted from a report that a GE CF34-3B1 turbofan engine experienced an uncontained fan disk failure during flight operation. After landing the airplane, an inspection of the GE CF34-3B1 engine showed the front section of the engine failed, resulting in the fan, forward cowlings, and fan reverser departing from the engine. The airplane sustained minor fuselage damage. A subsequent inspection of the recovered segments of the fan disk found an electrical arc-out defect at the fracture origin site. The fan disk was marked using the electro-chemical etch marking (ECM) procedure during engine assembly. If the ECM procedure is performed incorrectly, an arc-out defect can occur. This arc-out defect, caused during part marking, resulted in the uncontained failure.

This condition, if not corrected, could result in an uncontained fan disk failure and airplane damage. Since emergency AD 2007-04-51 was issued, GE discovered eight additional SNs of fan disks suspected of having an arc-out defect.

Relevant Service Information

We have reviewed and approved the technical contents of GE Alert Service Bulletin (ASB) No. CF34-BJ S/B 72-A0213, dated February 15, 2007, and Revision 1, dated February 27, 2007, and GE ASB No. CF34-AL S/B 72-A0232, dated February 15, 2007, and Revision 1, dated February 27, 2007, that describe procedures for visual and tactile inspection of certain areas of certain SN fan disks suspected of having an arc-out defect.

FAA's Determination and Requirements of This AD

Since the unsafe condition described is likely to exist or develop on other engines of the same type design, we are issuing this AD to supersede emergency AD 2007-04-51 and to prevent an uncontained fan disk failure and airplane damage. This AD requires a onetime visual and tactile inspection of certain areas of certain SN fan disks for an arc-out defect, within 20 engine flight hours after the effective date of this AD. You must use the service information described previously to perform the actions required by this AD.

FAA's Determination of the Effective Date

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists to make the AD effective immediately to all known U.S. owners and operators of GE CF34-3A1/-3B/-3B1 turbofan engines. We are publishing the AD in the Federal Register as an amendment to Section 39.13 of part 39 of the Code of Federal Regulations (14 CFR part 39) to make it effective to all persons.

Interim Action

These actions are interim actions and we may take further rulemaking actions in the future.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include “AD Docket No. FAA-2007-27308; Directorate Identifier 2007-NE-06-AD” in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the DMS Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78) or you may visit <http://dms.dot.gov>.

Examining the AD Docket

You may examine the docket that contains the AD, any comments received, and any final disposition in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in ADDRESSES. Comments will be available in the AD docket shortly after the DMS receives them.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:



2007-05-16 General Electric Aircraft Engines: Amendment 39-14977. Docket No. FAA-2007-27308; Directorate Identifier 2007-NE-06-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective March 12, 2007.

Affected ADs

(b) This AD supersedes emergency AD 2007-04-51.

Applicability

(c) This AD applies to General Electric Aircraft Engines (GE) CF34-3A1/-3B/-3B1 turbofan engines that have fan disks with serial numbers (SNs) listed in Table 1 of this AD.

Table 1 - Fan Disk SNs and Last Known Associated Engine Serial Number (ESN).

SN (Fan Disk)	ESN (Current)
GEE148JH	872787
GEE01629	807168
GEE01888	807188
GEE147MF	807620
GEE147NA	807622
GEE147V5	807624
GEE147VC	807625
GEE148JG	807633
GEE145LL	872526
GEE145NK	872545
GEE1466F	872563
GEE1466L	872568
GEE146H3	872599
GEE146KD	872604

SN (Fan Disk)	ESN (Current)
GEE146N7	872634
GEE147N7	872705
GEE147N8	872709
GEE14818	872727
GEE14815	872730
GEE1480J	872731
GEE1485J	872745
GEE1480F	872750
GEE14885	872763
GEE148EJ	872780
GEE148FT	872785
GEE148ER	872790
GEE148PN	872804
GEE148RN	872811
GEE148TW	872817
GEE03675	SPARE
GEE148R0	SPARE
GEE148VT	872830
GEE148WC	872837
GEE1F9G6	872841
GEE1F9G8	872846
GEE1F9GA	872849
GEE1F9WN	872857
GEE1FA22	872866
GEE1FA6H	872886

(d) For reference, affected regional jet fan disk part numbers (P/Ns) are 5922T01G04, 5922T01G05, 6078T57G01, 6078T57G02, 6078T57G03, 6078T57G04, 6078T57G05, and 6078T57G06.

(e) For reference, affected business jet fan disk P/Ns are 5921T18G01, 5921T18G09, 5921T18G10, 5921T54G01, 5922T01G02, 5922T01G04, 5922T01G05, 6020T62G04, 6020T62G05, 6078T00G01, 6078T57G01, 6078T57G02, 6078T57G03, 6078T57G04, 6078T57G05, and 6078T57G06.

(f) These engines are installed on, but not limited to, Bombardier, Inc. CL-600-2B16 (CL-601-3R Variant), CL-600-2B16 (CL-604 Variant), and CL-600-2B19 (Regional Jet Series 100 and 440) model airplanes.

Unsafe Condition

(g) This AD results from GE discovering eight additional SNs of fan disks suspected of having an arc-out defect, and from the original report that a GE CF34-3B1 turbofan engine experienced an uncontained fan disk failure during flight operation. We are issuing this AD to prevent an uncontained fan disk failure and airplane damage.

Compliance

(h) You are responsible for having the actions required by this AD performed within 20 engine flight hours after the effective date of this AD, unless the actions have already been done.

Inspection of the Fan Disk

(i) Perform a onetime visual and tactile inspection of the bore area on the 39 fan disks listed in Table 1 of this AD, that have not had a shop-level inspection.

(j) For regional jet engine models CF34-3A1/-3B1, use paragraphs 3.A through 3.B.(2)(h) of the Accomplishment Instructions of GE Alert Service Bulletin (ASB) No. CF34-AL S/B 72-A0232, Revision 1, dated February 27, 2007, to do the inspections.

(k) For business jet engine models CF34-3A1/-3B, use paragraphs 3.A through 3.B.(2)(h) of the Accomplishment Instructions of GE ASB No. CF34-BJ S/B 72-A0213, Revision 1, dated February 27, 2007, to do the inspections.

Previous Inspection Credit

(l) Previous inspection credit is allowed:

(1) For regional jet engine models CF34-3A1/-3B1, inspected using paragraphs 3.A through 3.B.(2)(g) of the Accomplishment Instructions of GE ASB No. CF34-AL S/B 72-A0232, dated February 15, 2007, for the fan disk SNs listed in emergency AD 2007-04-51.

(2) For business jet engine models CF34-3A1/-3B, inspected using paragraphs 3.A through 3.B.(2)(g) of the Accomplishment Instructions of GE ASB No. CF34-BJ S/B 72-A0213, dated February 15, 2007, for the fan disk SNs listed in emergency AD 2007-04-51.

(m) Fan disks listed in Table 1 of this AD that have already had a full visual inspection, eddy current inspection, and fluorescent penetrant inspection using GE CF34-3 (BJ) Heavy Maintenance Manual SEI-782, Section 72-21-00, or using GE CF34-3 (RJ) Engine Manual SEI-756, Section 72-21-00, are considered in compliance with this AD.

Alternative Methods of Compliance

(n) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(o) AD 2006-05-04, dated March 3, 2006, also addresses the subject of this AD. GE ASB No. CF34-BJ S/B 72-A0088, dated August 21, 2000, and GE ASB No. CF34-AL S/B 72-A0103, dated August 4, 2000, pertain to the subject of this AD.

(p) For further information, contact: Tara Chaidez, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803, e-mail: tara.chaidez@faa.gov; telephone (781) 238-7773; fax (781) 238-7199.

Material Incorporated by Reference

(q) You must use the service information specified in Table 2 of this AD to perform the actions required by this AD. The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 2 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, fax (513) 672-8422. You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Table 2 – Incorporation by Reference

GE Aircraft Engines Alert Service Bulletin No.	Page	Revision	Date
CF34-BJ S/B 72-A0213 Total Pages: 12	All	Original	February 15, 2007
CF34-BJ S/B 72-A0213 Total Pages: 13	All	1	February 27, 2007
CF34-AL S/B 72-A0232 Total Pages: 12	All	Original	February 15, 2007
CF34-AL S/B 72-A0232 Total Pages: 13	All	1	February 27, 2007

Issued in Burlington, Massachusetts, on February 28, 2007.

Peter A. White,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. E7-3833 Filed 3-6-07; 8:45 am]